I Claim:

1. An implant plate assembly for stabilization of the spine, comprising:

a first screw receiving socket element at a distal end of said assembly and configured with a screw shank passage and a screw head seat for attachment to a vertebra with the aid of a bone fixation screw;

an elongate arm extending proximally from said first socket element and having an elongate through slot therealong;

a second screw receiving socket element also configured with a screw shank passage and a screw head seat, and slidably received over said arm with its passage aligned over said slot for receiving the shank of a fixation screw therethrough for attachment to a vertebra;

said second socket element and said slot configured and dimensioned whereby portions of a screw head of a fixation screw seated in said second socket element protrude through said second socket element passage and engage edges of said slot for clamping said second socket element to said arm when said screw is fully secured in a vertebra.

2. The implant plate assembly of claim 1, edges of said slot including a series of adjacent screw head seat depressions for selectively seating portions of the head of a bone fixation screw.

3. The implant plate assembly of claim 1, a cap buttress nut threadably received in said second socket element over said screw head for engaging and covering said screw head.

4. The implant plate assembly of claim 3, said nut having bottom protuberances for engaging said screw head as a lock.

5. An implant for stabilization of the spine, comprising:

an elongate implant plate assembly having distal and proximal ends configured for respective attachment to first and second spaced vertebra with the aid of bone fixation screws;

said plate assembly including first and second screw receiving elements slidably received with respect to each other for adjustably changing the distance between said elements;

a lock assembly for selectively locking said first and second elements from further relative movement therebetween; and

said first and second screw receiving elements each having a screw head socket bowl for receiving the head of a bone fixation screw with mating intimacy and a passage in the bottom of each bowl for passage of the shank of a bone fixation screw;

said second screw receiving element slidable along an arm portion of said plate assembly, said lock assembly including a slot in said arm portion underlying said passage for said second bowl for receiving the shank of a fixation screw therethrough and therealong at desired positions, and said passage for said second bowl and said slot configured and dimensioned whereby portions of the head of a fixation screw received in said second bowl protrude through said passage for said second bowl to engage edges of said slot and thereby clamp said second screw receiving element to said plate assembly when said fixation screw is fully secured to a vertebra.

6. The implant of claim 5, including an open ended guide wire capture slot in said distal end which communicates with said first bowl passage.

7. The implant of claim 5, including locking caps configured and dimensioned for closing off said bowls with bone fixation screw heads seated in said bowls.

8. The implant of claim 7, said locking caps threadably received in said bowls and having bottom protuberances for engaging said screw heads as a lock.

9. The implant of claim 5, wherein said distal end has a leading transverse edge which is tapered.

10. The implant of claim 5, wherein said plate assembly is longitudinally curved to mate a specific lordotic curve.

11. The implant of claim 5, wherein said slot is dimensioned and contoured for seating portions of the head of a bone fixation screw protruding from said second bowl.

12. The implant of claim 11, edges of said slot including an aligned series of adjacent screw head seat depressions for selectively seating portions of the head of a bone fixation screw at different positions along said slot.

13. An implant system for stabilization of the spine with minimally invasive surgery, comprising:

an elongate implant plate assembly having distal and proximal ends configured for respective attachment to first and second vertebra with the aid of bone fixation screws, and further including first and second screw receiving elements slidably received with respect to each other for adjustably changing the distance between said elements, and having a lock assembly for selectively locking said first and second elements together to prevent further relative sliding therebetween;

an elongate insertion tool which is releaseably securable to the proximal end of said plate assembly whereby said tool and elongate plate assembly extend together end to end in their direction of elongation when secured together, and which tool is configured for manipulating said plate assembly and for remotely manipulating said screw receiving elements for adjusting the distance between said elements.

14. The implant system of claim 13, wherein said screw receiving elements each have a screw head socket bowl for receiving the head of a bone fixation screw with mating intimacy, and a passage in the bottom of each bowl for passage of the shank of a bone fixation screw.

15. The implant system of claim 14, including an open ended guide wire capture slot in said distal end which communicates with said first bowl passage.

16. The implant system of claim 14, including locking caps configured for closing off said bowls with bone fixation screw heads seated in said bowls.

17. The implant system of claim 14, wherein said distal end has a leading transverse edge which is tapered for permitting the implant to nestle next to a facet joint without impeding the joint's functional movement.

18. The implant system of claim 14, wherein said plate assembly is longitudinally curved to mate a specific lordotic, straight or kyphotic curve.

19. The implant system of claim 13, said second screw receiving element slidable along an arm portion of said plate assembly, said lock assembly including a slot in said arm portion underlying said second bowl for receiving the shank of a fixation screw therethrough and therealong at desired positions, and said slot is dimensioned for seating portions of the head of a bone fixation screw protruding from said second bowl passage.

20. The implant system of claim 19, edges of said slot including an aligned series of adjacent screw head seat depressions for selectively seating portions of the head of a bone fixation screw.

21. A method of stabilizing spaced vertebra bodies in the human spine with minimally invasive surgery, comprising the steps of:

providing an elongate implant plate assembly having proximal and distal ends with first and second screw receiving socket elements configured for respective attachment to first and second spaced vertebra with the aid of bone fixation screws, said elements slidably received with respect to each other for adjustably changing the distance between said screw receiving socket elements, and having a lock assembly for selectively locking said first and second screw receiving socket elements from further relative sliding, said second socket element positioned adjacent the proximal end of said plate assembly;

additionally providing an elongate insertion tool which is releaseably securable to the proximal end of said plate assembly whereby said tool and elongate plate assembly extend together end to end in their direction of elongation when secured together, and configured for manipulating said plate assembly and for remotely manipulating said socket elements for adjusting the distance therebetween;

securing said insertion tool to the proximal end of said plate assembly for manipulation thereof;

making an incision adjacent said second vertebra for inserting said implant plate assembly;

inserting said plate assembly into said incision, distal end first, and positioning said second screw receiving socket over said second vertebra by manipulation with said insertion tool;

partially securing said proximal end to said second vertebra with a bone fixation screw received in said second screw receiving socket;

extending said distal end relative to said proximal end and thereby positioning said first screw receiving socket over said first vertebra by remote manipulation with said insertion tool;

securing said distal end to said first vertebra with a bone fixation screw received in said first screw receiving socket;

adjusting the distance between said first and second socket elements to a desired degree by remote manipulation of said socket elements with said insertion tool for thereby adjusting the distance between the two secured vertebra;

fully securing said proximal second screw;

locking said socket elements together from further relative motion with said lock assembly; and

detaching said insertion tool from said implant plate assembly.

22. The method of claim 21, including the step of guiding the manipulations of said implant plate assembly relative to said vertebra by using fluoroscopy.

23. The method of claim 22, including the steps of pre-penetrating said first and second vertebra for thereby providing guide channels for said screws, positioning guide wires in said guide channels prior to the steps of securing, and securing by using self tapping cannulated pedicle screws received over and guided by said wires, and after securing removing said guide wires.

24. The method of claim 23, wherein the step of positioning said distal end includes providing an open ended guide slot in the leading edge of said distal end which provides access to a distal screw securement passage in said first screw receiving socket element, and guiding the extension and positioning of said distal end by capturing said distal guide wire in said slot while extending said distal end until said distal passage of said first socket element is centered over said distal guide wire.

25. The method of claim 21, wherein the step of fully securing said proximal second screw simultaneously accomplishes the step of locking said socket elements together.